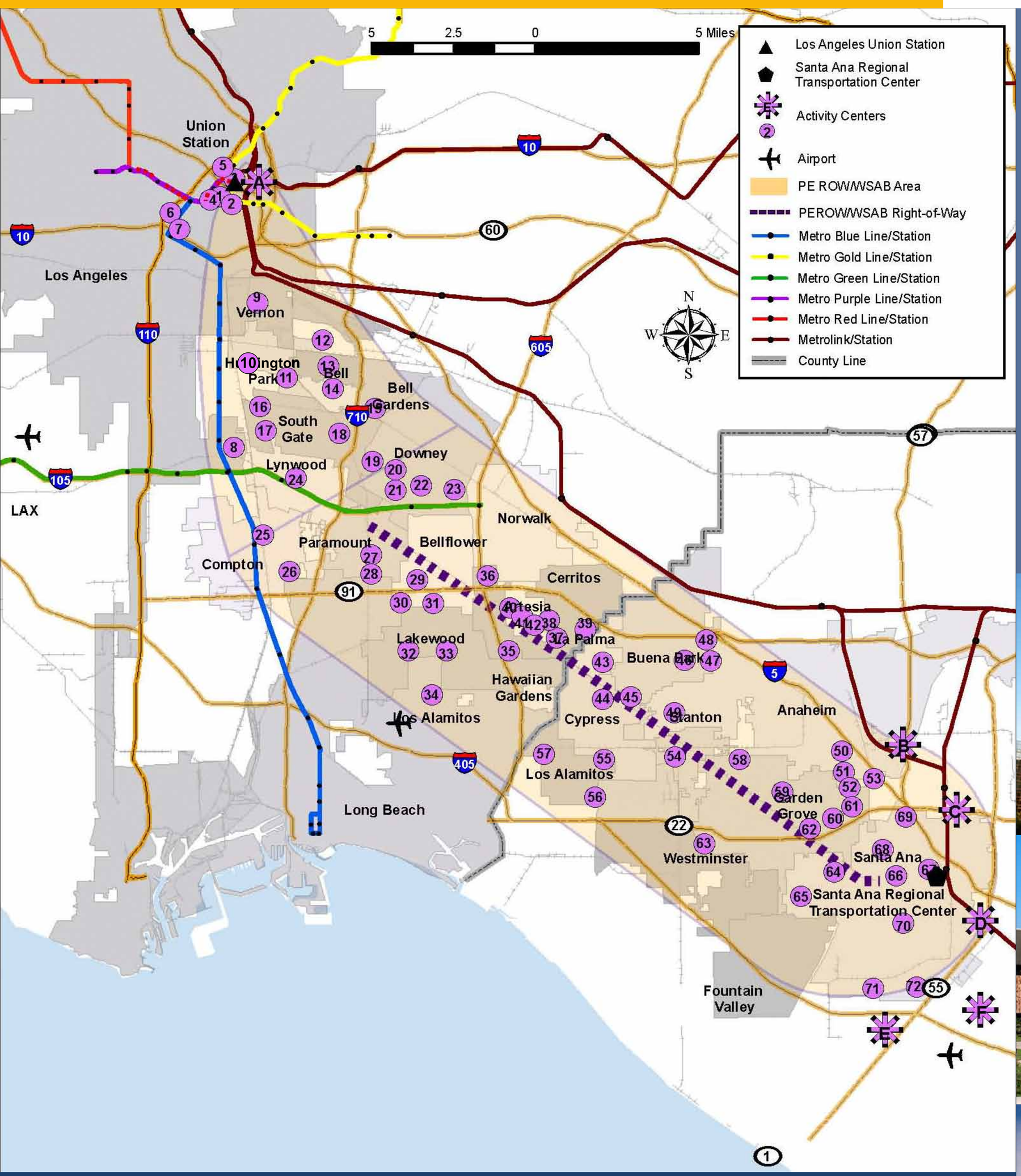
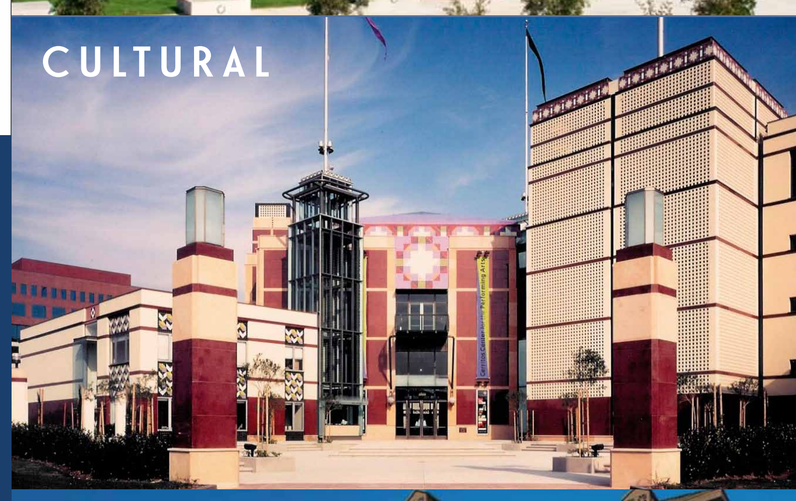
1 THE CORRIDOR TODAY

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS



ACTIVITY CENTERS/DESTINATIONS

1. Civic Center, Los Angeles
2. Little Tokyo, Los Angeles
3. Olvera Street and Pueblo de Los Angels State Park, Los Angeles
4. Music Center and Disney Hall, Los Angeles
5. Chinatown, Los Angeles
6. Staples Center and Los Angeles Convention Center, Los Angeles
7. California Hospital and Medical Center, Los Angeles
8. Watts Tower State Historic Park, Los Angeles
9. Civic Center, Vernon
10. Pacific Avenue, Huntington Park
11. Community Hospital, Huntington Park
12. Civic Center, Maywood
13. Civic Center, Bell
14. Civic Center, Cudahy
15. Civic Center, Bell Gardens
16. South Gate Plaza, South Gate
17. Civic Center, South Gate
18. South Gate Park, South Gate
19. Los Amigos County Golf Course, Downey
20. Rancho Los Amigos Medical Center, Downey
21. Civic Center, Downey
22. Stonewood Shopping Center, Downey
23. Downey Medical Center, Downey
24. Civic Center, Lynwood
25. Civic Center, Compton
26. Compton Community College, Compton
27. Civic Center, Paramount
28. Suburban Medical Center, Paramount
29. Civic Center, Bellflower
30. Bellflower Medical Center, Bellflower
31. Bellwood General Hospital, Bellflower
32. Lakewood Center Mall, Lakewood
33. Civic Center, Lakewood
34. Long Beach City College, Long Beach
35. Los Cerritos Cneter and Best Plaza, Cerritos
36. Cerritos College, Cerritos
37. Civic Center, Cerritos
38. Cerritos Town Center, Cerritos
39. Cerritos Center for Performing Arts, Cerritos
40. Civic Center, Artesia
41. Little India, Artesia
42. Pioneer Hospital, Artesia
43. Civic Center, La Palma
44. Civic Center, Cypress
45. Cypress College, Cypress
46. Knott's Berry Farm, Buena Park
47. Buena Park Mall, Buena Park
48. Civic Center, Buena Park
49. Anaheim General Hospital, Anaheim
50. Anaheim Convention Center, Anaheim
51. Disneyland, Anaheim
52. The City Center, Anaheim
53. UC Irvine Medical Center, Anaheim
54. Civic Center, Stanton
55. Los Alamitos Racetrack, Los Alamitos
56. Los Alamitos Armed Forces Reserve Center, Los Alamitos
57. Civic Center, Los Alamitos
58. Garden Grove Promenade and Pavilion Plaza, Garden Grove
59. Civic Center, Garden Grove
60. Harbor Plaza and Garden Grove Center, Garden Grove
61. Crystal Cathedral, Garden Grove
62. Garden Grove Hospital, Garden Grove
63. Little Saigon, Westminster
64. Willowbrook Municipal Golf Course, Santa Ana
65. Centennial Regional Park, Santa Ana
66. Civic Center, Santa Ana
67. Downtown Santa Ana, Santa Ana
68. Rancho Santiago College, Santa Ana
69. Bristol Market Place, Santa Ana
70. Coastal Communities Hospital, Santa Ana
71. South Coast Plaza, Costa Mesa
72. Orange County Performing Arts Center, Santa Ana



- PEROW/WSAB Right-of-Way portion of the Corridor Study Area is 20 miles long and averages 100 feet in width.
- Northern Connections Area, running north to Downtown Los Angeles/Union Station, is 12 miles long.
- The Corridor has a diverse set of activity centers and destinations, including civic centers, schools and colleges, parks, shopping, employment centers and visitor cultural and entertainment destinations.
- Today the Corridor is home to 4.5 million people – 3.3 million live in Los Angeles County and 1.2 million reside in Orange County. By 2035, the Corridor population will grow by 12%.
- Today 2.2 million jobs are located in the Corridor – 1.5 million in Los Angeles County and 700,000 in Orange County. By 2035, Corridor jobs in Orange County will increase by 13%, while Corridor jobs in Los Angeles County will decrease by 4%.
- By 2035, total daily travel will increase by 20%.
- More than 85% of work trips are made by car.

COMMUNITY OUTREACH

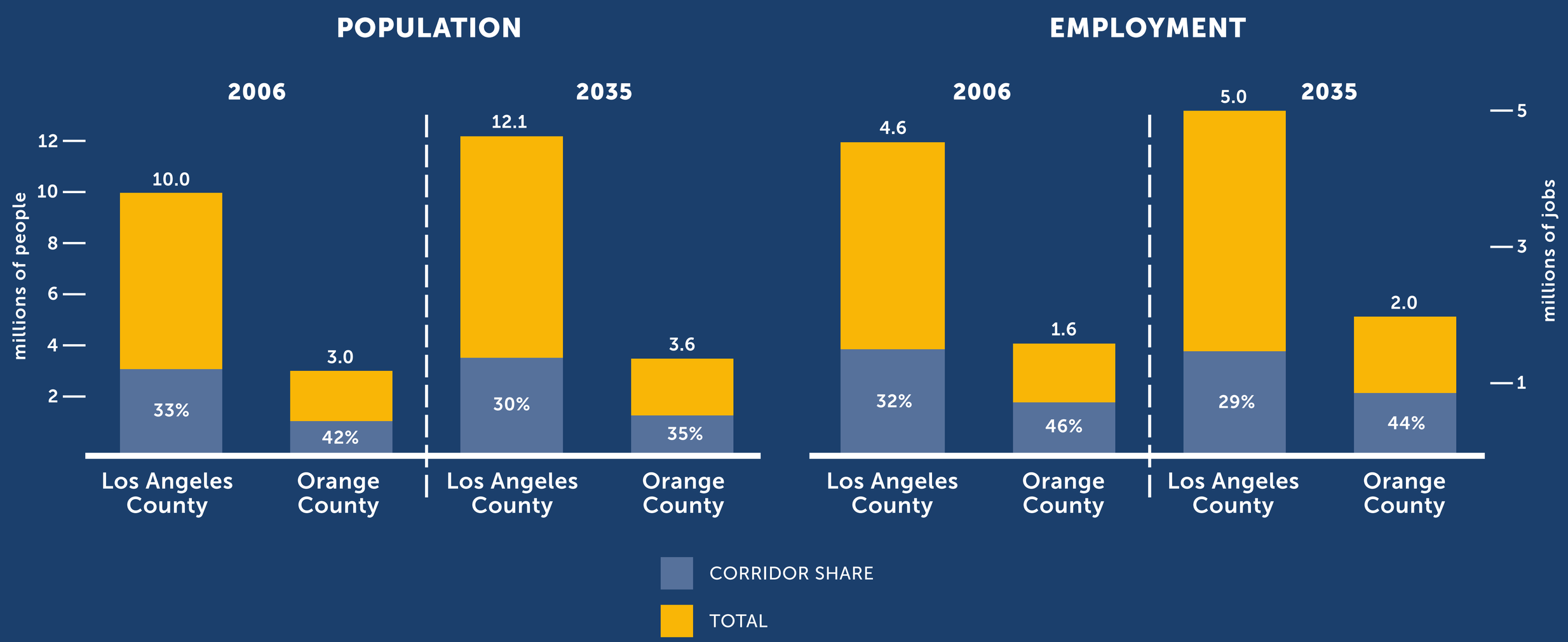
PACIFIC ELECTRIC CORRIDOR

WEST SANTA ANA BRANCH

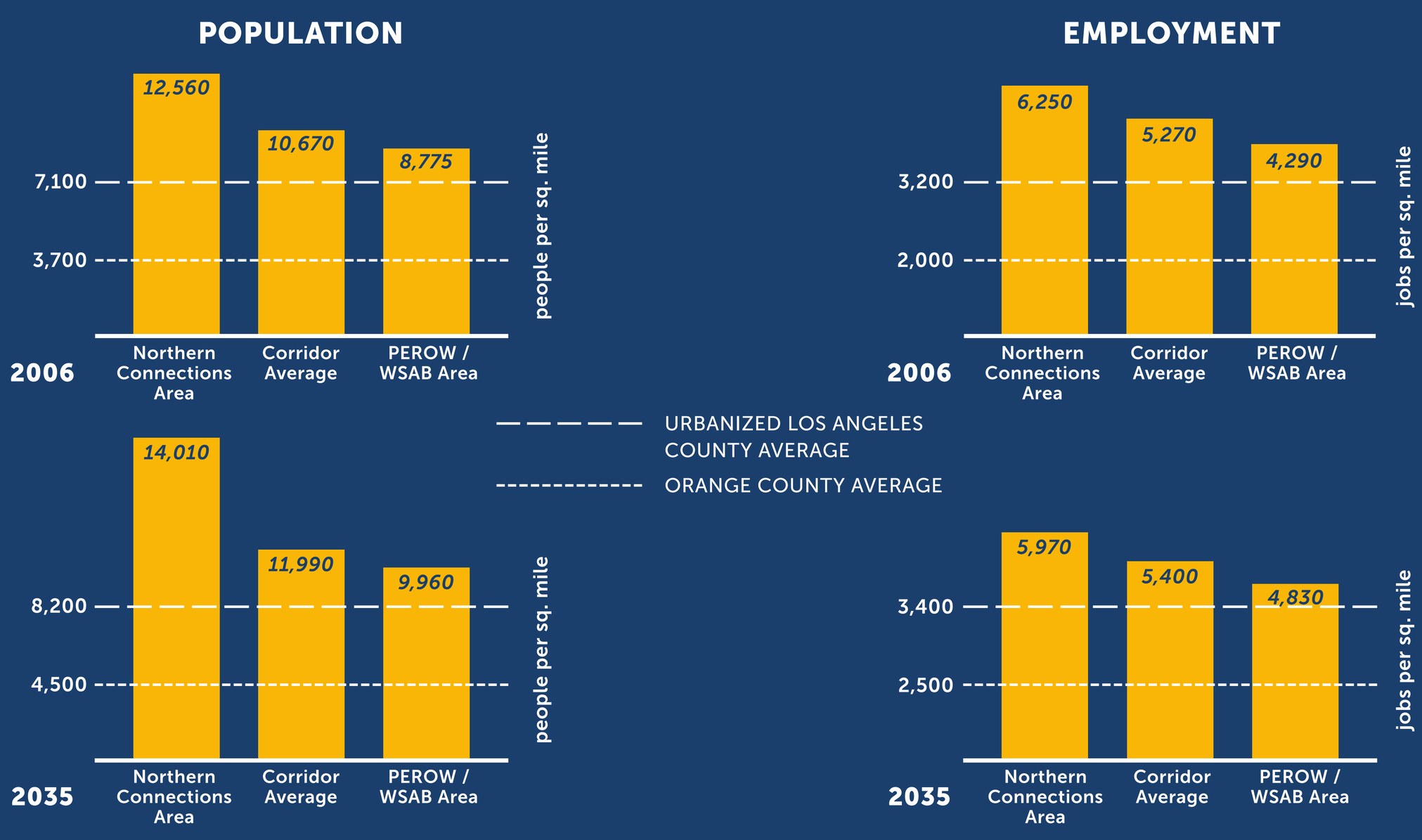
2 WHY THIS CORRIDOR?

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

Large share of regional population and employment



Existing and future high population and employment densities



COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR

WEST SANTA ANA BRANCH

3 THE CORRIDOR IN 2035

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

From a transportation system perspective:

- Corridor highway system operates at-capacity and beyond today and in the future
- Corridor residents lack connections to the regional transit system and have few travel options
- Corridor transit system operates at-capacity and beyond in some areas
- Corridor contains a significant low income/transit dependent population

COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR

WEST SANTA ANA BRANCH

4 INITIAL SET OF ALTERNATIVES

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

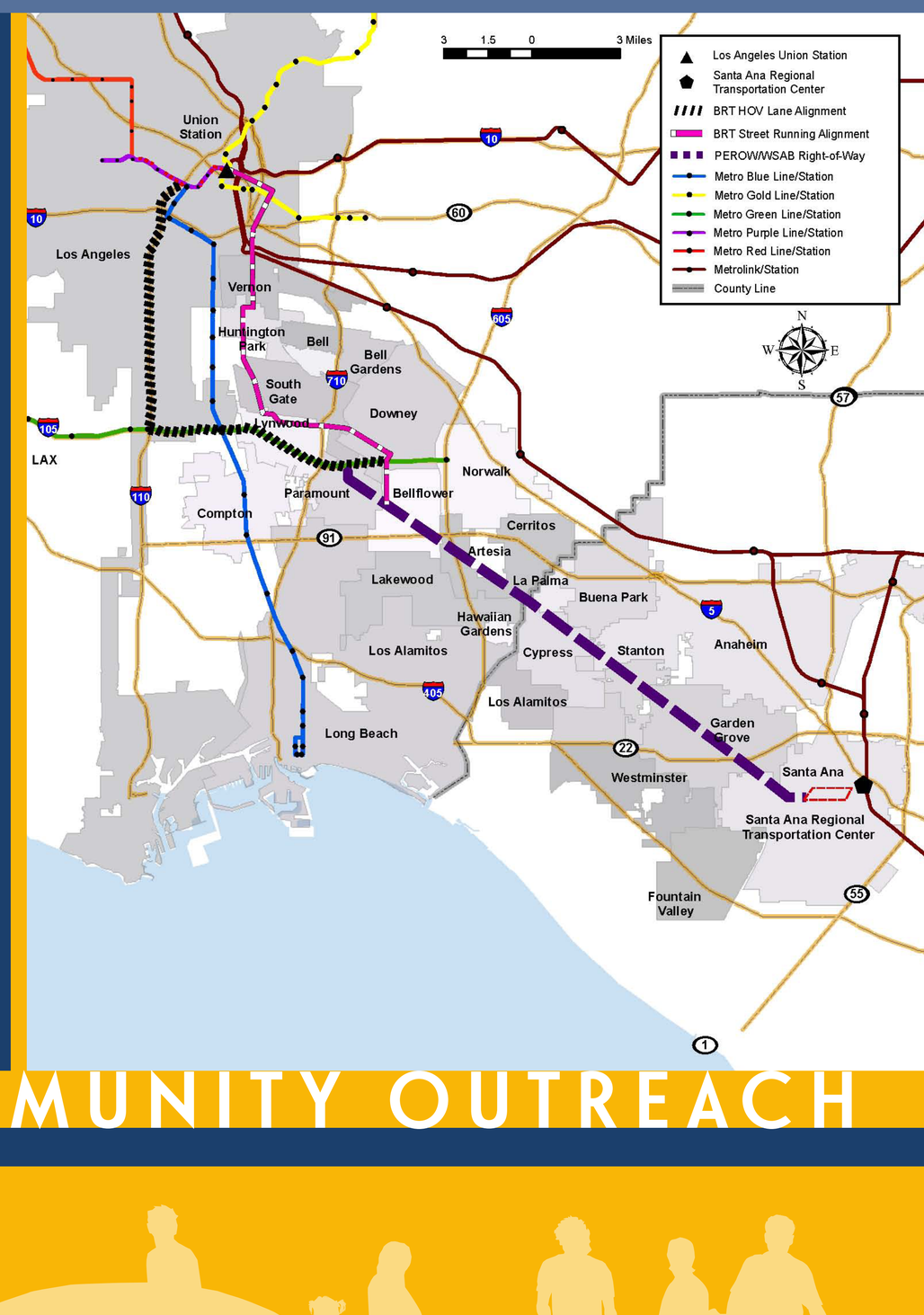
ALTERNATIVES DEFINED BY:

- HORIZONTAL ALIGNMENT
- VERTICAL ALIGNMENT

ALIGNMENT	BRT	STREETCAR	LIGHT RAIL	DIESEL MULTIPLE UNIT	HIGH SPEED RAIL
At-grade	●	●	●	●	—
Above-grade	●	●	●	●	●
Below-grade	—	●	●	●	—

BRT ALIGNMENTS

Trips	Serves regional and local trips
Alignment	Use PEROW/WSAB ROW and freeway HOV lanes or street-running operations north
Speed	Street-running (10-14 mph); HOV (25-35 mph)
Station Spacing	1.0 mile between stations
Land Use Plans	Support for development/revitalization plans proven internationally (Canada, Australia)



COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR

WEST SANTA ANA BRANCH

5 OTHER ALTERNATIVES

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

RAIL ALIGNMENTS

Trips	Serves regional and local trips
Alignment	Use PEROW/WSAB ROW and then RR ROWs north with temporal separation or provide 3 tracks
Speed	Provides a low to medium speed: 8.5-15 mph (streetcar); 25-35 mph (LRT); 25-55 mph (DMU)
Station Spacing	0.2-0.5 miles between stops (streetcar); 1-1.5 miles (LRT); 1.5-3.0 miles (DMU)
Land Use	Demonstrated support for development/revitalization plans

HSR ALIGNMENT

Trips	Serves regional trips
Alignment	Use PEROW/WSAB ROW and then operate above RR ROWs north
Speed	Provides high speed of 110-220 mph
Station Spacing	10-20 miles between stations
Land Use	Demonstrated support for high density development nationally (Conventional) and internationally (Conventional & Maglev)

COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR

WEST SANTA ANA BRANCH

6 BRT–BUS RAPID TRANSIT

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Metro Orange Line

DESCRIPTION

Trip Types: Regional and Local
Distance Between Stops: 1.0 miles
Speeds: 10-14 mph (street-running), 25-35 mph (HOV)
Conceptual Ridership: 19,200-32,400

OPERATING ASSESSMENT

Metro/OCTA Fit: Yes
Domestic Revenue Service: Yes
Meets Federal "Buy America" Requirements: Yes

ORDER-OF-MAGNITUDE COSTS

Conceptual Construction Costs (2010$)

- **At-Grade:** $0.60 billion
- **Above Grade:** $2.18 billion
- **Below Grade:** Not done due to ventilation issues

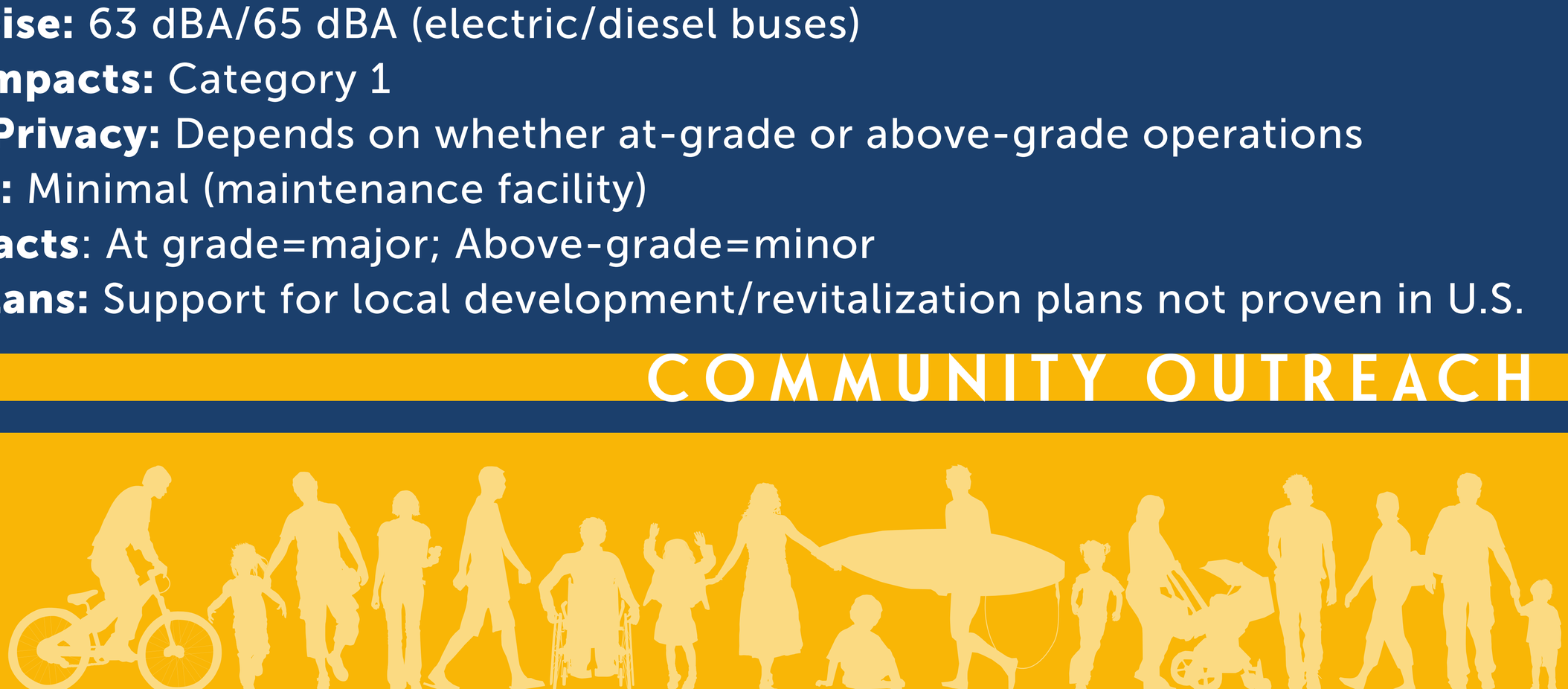
Conceptual Annual Cost to Operate: $80-120 per service hour
Current Fare Per Trip: $1.50 (Metro Orange Line)
Conceptual Annual Cost Per Rider: $20-50

ENVIRONMENTAL/COMMUNITY BENEFITS/IMPACTS

Air Quality Benefits: Yes
Average Noise: 63 dBA/65 dBA (electric/diesel buses)
Vibration Impacts: Category 1
Visual and Privacy: Depends on whether at-grade or above-grade operations
Acquisition: Minimal (maintenance facility)
Traffic Impacts: At grade=major; Above-grade=minor
Land Use Plans: Support for local development/revitalization plans not proven in U.S.

COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR
WEST SANTA ANA BRANCH



7 STREETCAR

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Portland Streetcar

DESCRIPTION

Trip Types: Local
Distance Between Stops: 0.2-0.5 miles
Speeds: 8.5-15 mph (mixed-flow), 25-40 mph (separate right-of-way)
Conceptual Ridership: 26,000-39,000

OPERATING ASSESSMENT

Metro/OCTA Fit: May fit future OCTA plans
Domestic Revenue Service: Yes
Meets Federal "Buy America" Requirements: Yes

ORDER-OF-MAGNITUDE COSTS

Conceptual Construction Costs (2010$)

At-Grade: $1.30 billion
Above Grade: $3.95 billion
Below Grade: $9.81 billion

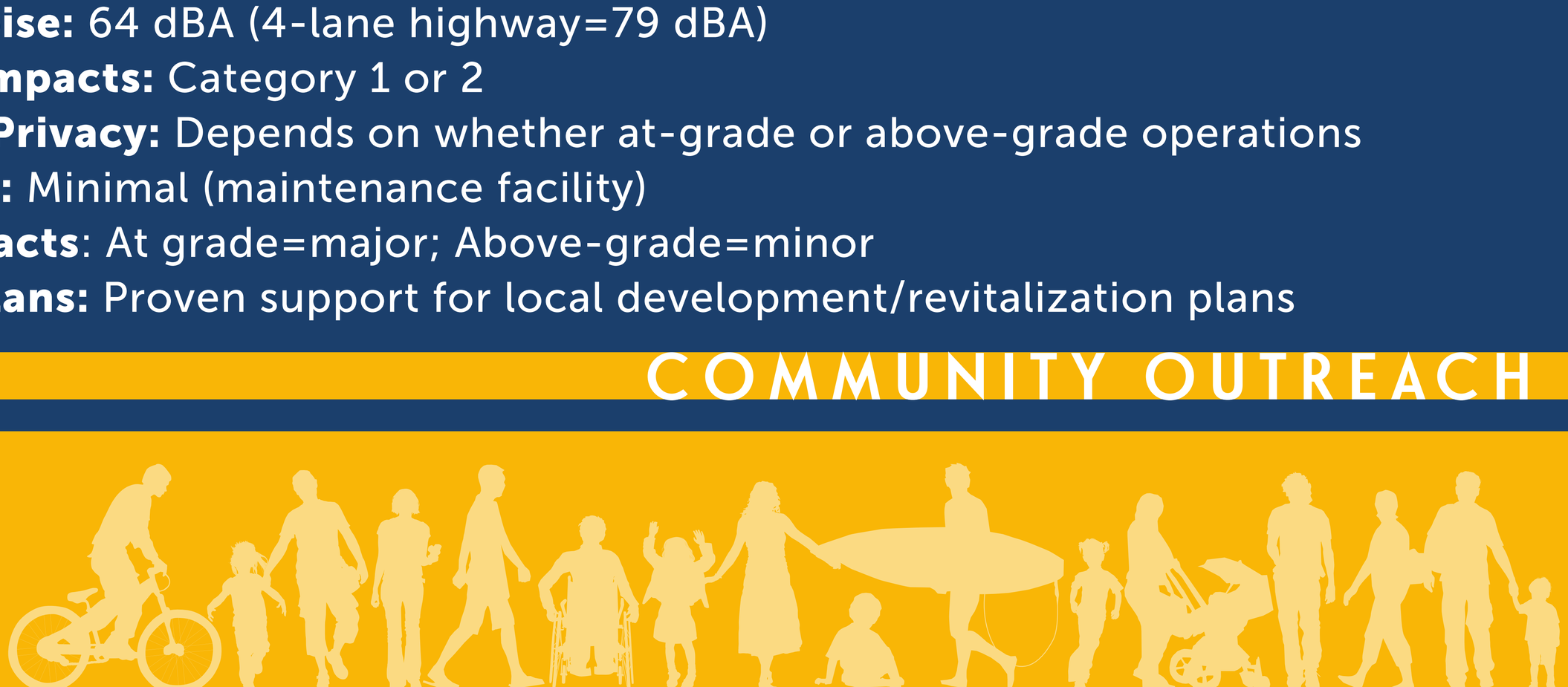
Conceptual Annual Cost to Operate: $140-150 per service hour
Current Fare Per Trip: $2.05 (Portland)
Conceptual Annual Cost Per Rider: $10-40

ENVIRONMENTAL/COMMUNITY BENEFITS/IMPACTS

Air Quality Benefits: Yes
Average Noise: 64 dBA (4-lane highway=79 dBA)
Vibration Impacts: Category 1 or 2
Visual and Privacy: Depends on whether at-grade or above-grade operations
Acquisition: Minimal (maintenance facility)
Traffic Impacts: At grade=major; Above-grade=minor
Land Use Plans: Proven support for local development/revitalization plans

COMMUNITY OUTREACH

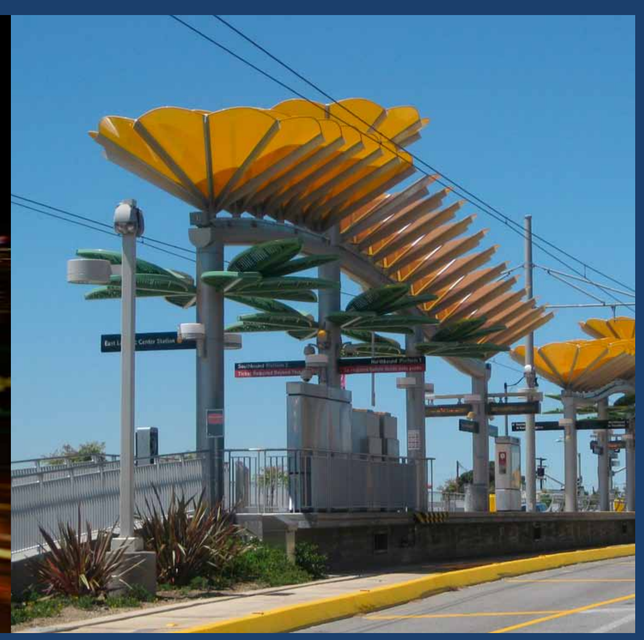
PACIFIC ELECTRIC CORRIDOR
WEST SANTA ANA BRANCH



8 LRT–LIGHT RAIL TRANSIT

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

Metro Gold Line



DESCRIPTION

Trip Types: Regional and Local
Distance Between Stops: 1.0-1.5 miles
Speeds: 25-35 mph (mixed-flow), 45-55 mph (separate right-of-way)
Conceptual Ridership: 26,000-57,600

OPERATING ASSESSMENT

Metro/OCTA Fit: Yes
Domestic Revenue Service: Yes
Meets Federal "Buy America" Requirements: Yes

ORDER-OF-MAGNITUDE COSTS

Conceptual Construction Costs (2010$)

At-Grade: $1.60 billion
Above Grade: $4.21 billion
Below Grade: $10.61 billion

Conceptual Annual Cost to Operate: $160-250 per service hour
Current Fare Per Trip: $1.50 (Metro Rail System)
Conceptual Annual Cost Per Rider: $10-50

ENVIRONMENTAL/COMMUNITY BENEFITS/IMPACTS

Air Quality Benefits: Yes
Average Noise: 64 dBA (4-lane highway=79 dBA)
Vibration Impacts: Category 3 (may require mitigation)
Visual and Privacy: Depends on whether at-grade or above-grade operations
Acquisition: Less than 10 parcels
Traffic Impacts: At grade=major; Above-grade=minor
Land Use Plans: Proven support for local development/revitalization plans

COMMUNITY OUTREACH

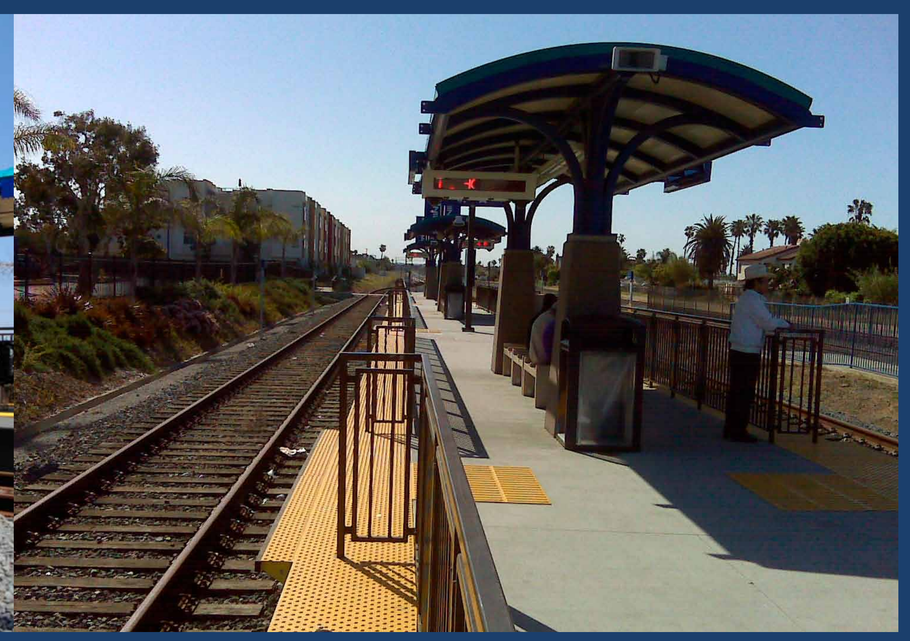
PACIFIC ELECTRIC CORRIDOR

WEST SANTA ANA BRANCH

9 DMU–DIESEL MULTIPLE UNIT

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

San Diego Sprinter



DESCRIPTION

Trip Types: Regional and Local
Distance Between Stops: 1.5-3.0 miles
Speeds: 25-35 mph (mixed-flow), 45-55 mph (separate right-of-way)
Conceptual Ridership: 26,000-57,600

OPERATING ASSESSMENT

Metro/OCTA Fit: No
Domestic Revenue Service: Yes
Meets Federal "Buy America" Requirements: Yes

ORDER-OF-MAGNITUDE COSTS

Conceptual Construction Costs (2010$)

At-Grade: $1.22 billion
Above Grade: $4.11 billion
Below Grade: Not done due to ventilation issues

Conceptual Annual Cost to Operate: $250-300 per service hour
Current Fare Per Trip: $2.00 (NCTD Sprinter)
Conceptual Annual Cost Per Rider: $10-50

ENVIRONMENTAL/COMMUNITY BENEFITS/IMPACTS

Air Quality Benefits: Yes/No
Average Noise: 65 dBA (4-lane highway=79 dBA)
Vibration Impacts: Category 4 or 5 (may require mitigation)
Visual and Privacy:
Acquisition: Less than 10 parcels (plus maintenance facility)
Traffic Impacts: At grade=major; Above-grade=minor
Land Use Plans: Support for local development/revitalization plans not proven

COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR
WEST SANTA ANA BRANCH

10 HSR–CONVENTIONAL

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

The Javelin, England

AMTRAK Acela

DESCRIPTION

Trip Types: Regional
Distance Between Stops: 10-20+ miles
Speeds: 110-220 mph (grade-separated)
Conceptual Ridership: 2,400-4,800

OPERATING ASSESSMENT

Metro/OCTA Fit: No
Domestic Revenue Service: Yes
Meets Federal "Buy America" Requirements: Yes

ORDER-OF-MAGNITUDE COSTS

Conceptual Construction Costs (2010$)

- **At-Grade:** NA (grade-separated to achieve high speeds)
- **Above Grade:** $4.91 billion
- **Below Grade:** $13.35 billion

Conceptual Annual Cost to Operate: $2,500-3,000 per service hour
Current Fare Per Trip: $50-55 (Amtrak Acela service)
Conceptual Annual Cost Per Rider: $460-920

ENVIRONMENTAL/COMMUNITY BENEFITS/IMPACTS

Air Quality Benefits: Yes
Average Noise: 65 dBA (4-lane highway=79 dBA)
Vibration Impacts: Category 5 (may require mitigation)
Visual and Privacy: Major due to above-grade operations
Acquisition: More than 100 parcels
Traffic Impacts: Minor due to above-grade operations
Land Use Plans: Operated in areas with high density development/plans

COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR
WEST SANTA ANA BRANCH

11 HSR–MAGLEV

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

Shanghai Maglev

DESCRIPTION

Trip Types: Regional
Distance Between Stops: 10-20+ miles
Speeds: 150-270+ mph (grade-separated)
Conceptual Ridership: 2,400-4,800

OPERATING ASSESSMENT

Metro/OCTA Fit: No
Domestic Revenue Service: Not yet
Meets Federal "Buy America" Requirements: Not yet

ORDER-OF-MAGNITUDE COSTS

Conceptual Construction Costs (2010$)

At-Grade: NA (grade-separated to achieve high speeds)
Above Grade: $5.94 billion
Below Grade: $14.01 billion

Conceptual Annual Cost to Operate: $2,500-3,000 per service hour
Current Fare Per Trip: NA
Conceptual Annual Cost Per Rider: $580-1,150

ENVIRONMENTAL/COMMUNITY BENEFITS/IMPACTS

Air Quality Benefits: Yes/No
Average Noise: 64 dBA (4-lane highway=79 dBA)
Vibration Impacts: Category 4 or 5 (may require mitigation)
Visual and Privacy: Major due to above-grade operations
Acquisition: More than 100 parcels (plus maintenance facility)
Traffic Impacts: Minor due to above-grade operations
Land Use Plans: Support for local development/revitalization plans not proven in U.S.

12 INITIAL SCREENING RESULTS

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

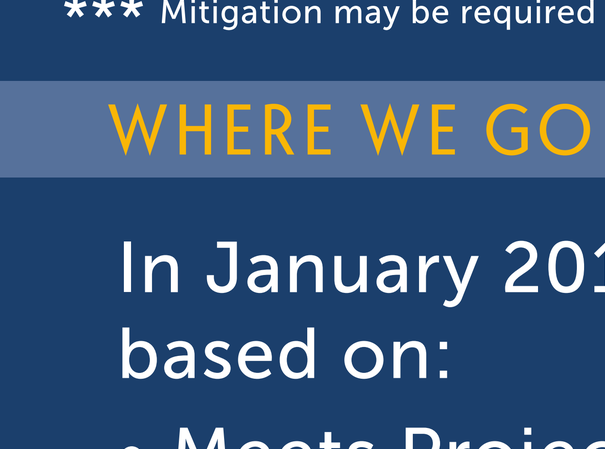
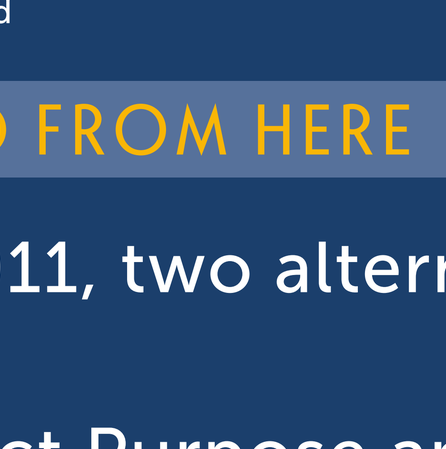
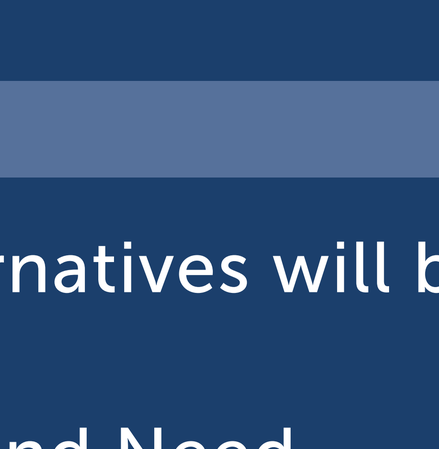
	BRT	STCR	LRT	DMU	HSR Conventional	HSR Maglev
Serves: Local Trips	○	○	○	○		
Regional Trips	○		○	○	○	○
Provides support for local plans	*	○	○	*	*	*
Requires acquisition	MINIMAL	MINIMAL	MINOR	MINOR	MAJOR	MAJOR
Has air quality benefits	YES	YES	YES	NO**	YES	YES
Fits with current system plans	○	○	○	NO	NO	NO
Has State and Federal approved vehicles/system	○	○	○	○	○	NOT YET
Conceptual ridership	19,200-32,400	26,000-39,000	26,000-57,600	26,000-57,600	2,400-4,800	2,400-4,800
Conceptual cost to build (2010, billions)	$0.6-2.2	$1.3-4.0	$1.6-4.2	$1.2-4.1	$4.9	$5.9
Conceptual cost per rider	$20-50	$10-40	$10-50	$10-50	$460-920	$580-1,150
Speeds	10-35 mph	15-40 mph	25-55 mph	25-55 mph	110-220 mph	150-270+ mph
Noise	63 dBa/65 dBa	64 dBa	64 dBa	65 dBa	71 dBa	64 dBa
Vibration	Category 1	Category 1 or 2	Category 3***	Category 4 or 5***	Category 5***	Category 4 or 5***

* Proven nationally and internationally
** Some regional benefits
*** Mitigation may be required

WHERE WE GO FROM HERE

In January 2011, two alternatives will be identified for further study based on:

- Meets Project Purpose and Need
- Appears viable from cost/ridership, funding, engineering, operating and environmental perspective
- Meets local goals
- Has public and stakeholder support

COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR

WEST SANTA ANA BRANCH

13 ALTERNATIVES ANALYSIS PROCESS

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

1

Preliminary Analysis
February–April 2010

2

Project Initiation /Scoping
May–June 2010

PUBLIC MEETINGS

PHASE 1
ENVISIONING OUR FUTURE
INITAL SET OF ALTERNATIVES

3

WE ARE HERE

Initial Alternatives Screening
July–December 2010

PUBLIC MEETINGS

4

Final Screening
January–September 2011

5

Draft Alternatives Analysis Report
October 2011

PUBLIC MEETINGS

PHASE 2
EXPLORING THE POSSIBILITIES
FINAL SET OF ALTERNATIVES

6

Final Alternatives Analysis Report With Recommendations
November–December 2011

PHASE 3
REALIZING OUR PREFERRED FUTURE

Next Steps
SCAG/LACMTA/OCTA Actions

COMMUNITY OUTREACH

PACIFIC ELECTRIC CORRIDOR

WEST SANTA ANA BRANCH